REMARKS

Applicant appreciates the time taken by the Examiner to review Applicant's present application. This application has been carefully reviewed in light of the Official Action mailed February 9, 2004. Applicant respectfully requests reconsideration and favorable action in this case.

Rejections under 35 U.S.C. § 102

Claims 1-51 are rejected anticipated by U.S. Patent No. 6,654,830 ("Taylor").

Applicant has amended Claims 1 and 23 to recite "a first node to connect the first storage area network to the storage area network extender, wherein the first node is configured to map a first device address for the device located on the first storage area network to an intermediary device identifier . . . [and] a second node located on the second storage area network, wherein the second node is configured receive the intermediary device identifier from the first node via the storage area network extender and map the intermediary device identifier to a second device address accessible by the host" and Claims 18 and 44 to recite "a first node to connect the first storage area network to a packet based network, wherein the first node is configured to map a first device address for a device to an intermediary device identifier; and a second node to connect the second storage area network to the packet based network, wherein the second node is configured to receive the intermediary device identifier from the first node via the storage area network extender and map the intermediary device identifier to a second device address accessible by the host." Independent Claims 10 and 35 recite "mapping a device address into an intermediary device identifier at a first node connected to the at least one additional storage area network; and mapping said intermediary device identifier into an address accessible by said host at a second node connected to the first storage area network." Each of these Claims share the feature that a node on the same SAN as a device can map the device address to an intermediary address. Additionally, a node on a second SAN can map the same intermediary address to an address accessible by a host on the second SAN.

The examiner cited, col. 29, lines 33-col. 30, lines 27 (in the rejection of unamended Claim 5), as showing that "device addresses are mapped to an intermediary device identifier, which in turn is mapped into an address accessible by said host." Applicant submits that, in the portion of Taylor cited by the Examiner, a LUN map can be established at a storage device to map LUNs exported to hosts to particular virtual circuits and storage devices. In other words,

the storage server of Taylor can provide virtual addressing by mapping LUNs provided to initiators to actual device address. Thus, the portion of Taylor cited by the examiner demonstrates the mapping of virtual LUNs at a particular storage server to one or more devices. Applicant submits, however, that the section cited by the Examiner describes internal mappings at a storage server. Applicant is unable to find reference in the portion cited by the Examiner to mapping a device address to an intermediary device identification at a node and mapping the same intermediary device identification to a host accessible address at another node. If the Examiner disagrees, Applicant respectfully requests that the examiner point out where such a reference can be found. Otherwise, Applicant respectfully requests allowance of Claims 1, 10, 23, 35 and 44.

Claims 4 and 26 have been amended to recite "wherein mapping a first device address for the device located on the first storage area network to the intermediary device identifier further comprises mapping the first device address to a generic transport identifier and wherein mapping the intermediary identifier to a second device address accessible by the host further comprises mapping the generic transport identifier to the second device address." These claims include the feature that a device address can be mapped to a generic identifier that used to identify the device across on the SAN extender. Applicant submits that each storage server of Taylor can present virtual LUNs (i.e., virtual device addresses) to initiators to which the storage device is connected. Applicant is unable to find a teaching or suggestion in the portions of Taylor cited by the Examiner to map a device address to a generic transport identifier at one node and map the generic transport identifier to an address accessible by a host at a second node on a different SAN than the first node. If the Examiner disagrees, Applicant respectfully requests that the Examiner point out where these features can be found in the cited reference or allow Claim 4 and Claim 26.

Claims 5 and 27 have been amended to recite that "mapping the first device address to the generic transport identifier further comprises mapping the first device address to a generic target identifier and mapping the generic target identifier to the generic transport identifier; and. . . mapping the generic transport identifier to the second device address further comprises mapping the generic transport identifier and a first node address to a generic host identifier." These claims include the features that at a node on a first SAN, a device address is mapped to a generic target identifier and the generic target identifier is mapped to a generic transport identifier. At a node on a second SAN, the generic transport identifier is mapped to a generic host identifier and the generic host identifier is mapped to an address accessible by a host.

Applicant respectfully request that the Examiner point out where these features of the present invention can be found in Taylor or allow Claim 5 and Claim 27.

Claims 7, 22, 29 and Claim 46 recite that the intermediary device identifier comprises a node identifier and a generic device identifier. Applicant notes that the "intermediary device identifier" is used by nodes on different SANs to identify a device. Moreover, because the device identifier is a generic device identifier, the generic device identifier is not tied to a particular protocol. In rejecting Claim 7, the Examiner cites col. 19, lines 25-49. Applicant submits that col. 19, lines 25-49 of Taylor describes a table internal to a particular storage server for mapping addressing information received with a storage transaction to virtual circuits maintained by the storage server. This portion of Taylor simply teaches that storage transactions addressed to a particular LUN or port can be routed to particular storage devices. To the extent the examiner considers the Protocol Specific Addresses to be the device identifiers, these identifiers are protocol specific and are not generic. To the extent the examiner considers the virtual device identification to be the generic device identification, this identification is used internally by the storage by the storage server to determine the devices to which a transaction should be mapped. Applicant is unable to find a teaching of an intermediary device identifier that includes a generic device identifier and a node address that is shared with nodes on different SANs. If the Examiner disagrees, Applicant respectfully requests that the Examiner point out where these features of the present invention can be found in the cited reference or allow Claims 7, 22, 29 and 46.

Claim 9, as amended, recites that the storage area networks communicate over the storage area network extender using an encapsulation protocol that encapsulates fiber channel protocol messages. In rejecting unamended Claim 9, the Examiner cites Col. 6, lines 38-60. This portion of Taylor describes various protocols that can be used by a storage server according to Taylor. Applicant, however, is unable to find a teaching that a particular non-fibre channel protocol should encapsulate fibre channel commands. If the Examiner disagrees, applicant respectfully requests that the Examiner point out where "using an encapsulation protocol that encapsulates fiber channel protocol messages" for communicating over the storage area network extender can be found in the cited reference. Otherwise, Applicant respectfully requests allowance of Claim 9.

Applicant has now made an earnest attempt to place this case in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office

Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-51. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-0456 of Gray Cary Ware & Freidenrich, LLP.

Respectfully submitted,

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